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EXAMINER
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SIMITOSKI, MICHAEL J

ART UNIT	PAPER NUMBER
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2134

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10/03/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/821,958

Applicant(s)

PARK, SANG-DO

Examiner

Michael J. Simitoski

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 12 April 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date See Continuation Sheet.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_.

Continuation of Attachment(s) 3). Information Disclosure Statement(s) (PTO/SB/08), Paper No(s)/Mail Date :1/07/2005, 10/13/2005 & 09/05/2006.

**DETAILED ACTION**

1. The IDS of 1/07/2005, 10/13/2005 & 09/05/2006 were received and considered.
2. Claims 1-19 are pending.

***Priority***

3. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

***Claim Objections***

4. Claim 11 is objected to because of the following informalities: "if there exists no decoding information in the authenticating the device operation" should be replaced with "if there exists no decoding information during the authenticating the device operation".

Appropriate correction is required. The limitation is read as such for the purposes of further prosecution.

***Claim Rejections - 35 USC § 112***

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 4, 6-9, 12 & 14-19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

- a. Regarding claims 4, 6-9, 12 & 14-17, the limitation "the network" is recited in numerous places, but lacks sufficient antecedent basis. *For the purposes of this action, the limitation "the network" in the above claims is read as "a network". It is noted that claims 9, 15 & 17 recite "the network", however, assuming the recitation in claims 8, 12 & 16, respectively, are changed to "a network" or amended correctly in another manner, claims 9, 15 & 17 may be left unamended.*
- b. Regarding claim 18, the limitation "the network" (line 2) lacks sufficient antecedent basis. *For the purposes of this action, the limitation "and the network is a home network" is not considered.*
- c. Regarding claim 19, the limitation "the network" (line 2) lacks sufficient antecedent basis. *For the purposes of this action, the limitation "and the network is a home network" is not considered.*
- d. Note that any claims rejected under 35 U.S.C. §112 and also rejected or objected to below are rejected or objected to below as best understood in light of the indefiniteness described above.

***Claim Rejections - 35 USC § 102***

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an

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international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8. Claims 1-2 & 18 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent 6,826,690 to Hind et al. (**Hind**).

Regarding claim 1, Hind discloses a device authentication system, comprising a device (client, col. 17, lines 31-34) having device information including coding information for authentication (device certificate, col. 10, lines 26-29, col. 17, line 41 & Fig. 3) and information (contents of issuer field, Fig. 3, #305 & col. 18, lines 12-16) on a service provider providing authentication services (certificate authority system including registry, col. 18, lines 12-16) and a gateway (server, col. 17, lines 54-55) including decoding information corresponding to the coding information of the device (public key of the certificate authority decrypts to the device certificate, col. 18, lines 10-16), and authenticating the device by using the decoding information (CA public key is used to verify the device certificate, col. 18, lines 10-20).

Regarding claim 2, Hind discloses wherein the service provider provides the decoding information (CA provides public key via registry, col. 18, lines 12-15), and wherein, if there exists no decoding information in the gateway (regardless), the gateway requests the decoding information (public key) from the service provider (certificate authority registry, col. 18, lines 12-15).

Regarding claim 18, as best understood, the device (client) is a home device (personal computer, col. 7, lines 9-10).

***Claim Rejections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 3-7 (as applied to claim 1 above), 10-15 & 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Hind**, in further view of U.S. Patent Application Publication 2001/0048744 to **Kimura**.

Regarding claim 3, Hind discloses an input/output unit into which the device information including the coding information and the information on the service provider is input (an inherent feature of the gateway (server), as both the coding information, i.e. the device certificate, and the information on the service provider, i.e. the information in the issuer field of the certificate, are input from the client, see col. 10, lines 26-29, col. 17, line 41 & col. 18, lines 12-20) and a device process unit (inherent part of the gateway (Hind's server)) for obtaining the decoding information (public key is received from registry at the server, see col. 18, lines 10-20), authenticating the device by using the decoding information (public key of the CA) and the coding information (device certificate, see col. 18, lines 10-20). These limitations are inherent device limitations of the gateway (Hind's server) as Hind's server performs the operations performed by the claimed device. However, Hind lacks selecting a display for displaying an authentication result and an application process unit for generating an authentication request screen requesting a user to approve or reject the authentication result. However, Kimura

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teaches a system where a client (MT) attempts to connect to a gateway (access point 18, ¶138), an authentication procedure is performed (¶¶39-40), a display is selected for displaying an authentication result (if authentication is performed successfully, ¶40, the authentication request display means 16 is notified, ¶42) and an authentication request screen is generated requesting a user to approve or to reject the authentication result (display means 16 notifies the network-administering user of the authentication-requesting MT, ¶42). This procedure is performed to prevent terminals from intruding from outside of a closed section, last lines of ¶16) to improve security (¶17). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Hind's server (gateway) with the functionality of Kimura's access point and as such to include a device process unit (server) that further selects a display for displaying the authentication result and to further include in the server an application process unit for generating an authentication request screen (notification of authentication request sent to administering user's display) requesting a user (administrator) to approve or to reject the authentication result. One of ordinary skill in the art would have been motivated to perform such a modification to prevent terminals from intruding from outside of a closed section (see last lines of ¶16) to improve security (¶17), as taught by Kimura.

Regarding claim 4, Hind, as modified above by Kimura, teaches wherein the input/output unit (server in Hind, access point in Kimura) outputs the authentication request screen to the display (display means notifies administrator, Kimura, ¶42) and the device process unit (server) controls the input/output unit (server) to set or not to set the device to



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the network (send an authentication response, Kimura, ¶43) based on a response of the user to the authentication result through the authentication request screen (Kimura, ¶43). As stated above, this modification of Hind's server in accordance with the functionality of Kimura's access point is obvious over Hind to prevent terminals from intruding from outside of a closed section (Kimura, see last lines of ¶16) to improve security (Kimura, ¶17), as taught by Kimura.

Regarding claim 5, Hind, as modified above by Kimura, teaches wherein the display (display means 16) externally display (displays to the user) the authentication result (request, Kimura, ¶42). Kimura further teaches a user input unit (authentication input means, Kimura, Fig. 1, #15 & ¶32) for inputting a selection command of the user in a response to the authentication result (Kimura, ¶42). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Hind's server to employ a user input means, in accordance with Kimura's invention. One of ordinary skill in the art would have been motivated to perform such a modification to prevent terminals from intruding from outside of a closed section (Kimura, see last lines of ¶16) to improve security (Kimura, ¶17), as taught by Kimura.

Regarding claim 6, Hind, as modified above by Kimura, discloses wherein the device process unit (server) controls the input/output unit (server) to set or not to set the device to the network (send an authentication response, Kimura, ¶43) in correspondence to the selection command inputted from the user input unit (Kimura, ¶¶42-43). As stated above, this modification of Hind's server in accordance with the functionality of Kimura's access point is

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obvious over Hind to prevent terminals from intruding from outside of a closed section (Kimura, see last lines of ¶16) to improve security (Kimura, ¶17), as taught by Kimura.

Regarding claim 7, Hind lacks cutting off the device from the network if the user's approval is not inputted for a predetermined period of time. However, Kimura discloses setting a wait timer and rejecting a connection to a server if a network administering user has not approved a connection within a predetermined amount of time (¶42, ¶46 & ¶52). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the server of Hind such that a device is cut off from the network (connection request is rejected) if the user's approval is not inputted for a predetermined period of time. One of ordinary skill in the art would have been motivated to perform such a modification to prevent terminals from intruding from outside of a closed section (Kimura, see last lines of ¶16) to improve security (Kimura, ¶17), as taught by Kimura.

Regarding claim 10, Hind discloses inputting device information including coding information for authentication (device certificate, col. 10, lines 26-29, col. 17, line 41 & Fig. 3) and information (contents of issuer field, Fig. 3, #305 & col. 18, lines 12-16) on a service provider providing authentication services (certificate authority system including registry, col. 18, lines 12-16) and authenticating the device (CA public key is used to verify the device certificate, col. 18, lines 10-20) by using previously stored decoding information (public key obtained) corresponding to the coding information of the device (public key of the certificate authority decrypts to the device certificate, col. 18, lines 10-16), but lacks selecting a display for displaying an authentication result and an generating an authentication request screen

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requesting a user's approval with respect to the authentication result. However, Kimura teaches a system where a client (MT) attempts to connect to a gateway (access point 18, ¶38), an authentication procedure is performed (¶¶39-40), a display is selected for displaying an authentication result (if authentication is performed successfully, ¶40, the authentication request display means 16 is notified, ¶42) and an authentication request screen is generated requesting a user to approve or to reject the authentication result (display means 16 notifies the network-administering user of the authentication-requesting MT, ¶42). This procedure is performed to prevent terminals from intruding from outside of a closed section, last lines of ¶16) to improve security (¶17). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Hind with the functionality of Kimura's access point and as such to select a display for displaying the authentication result (selecting the administrator's display, Fig. 1, #15 to display the notification, ¶42) and to further generate an authentication request screen (notification of authentication request sent to administering user's display) requesting a user's (administrator's) approval with respect to the authentication result (requesting an administering user to authorize the connection). One of ordinary skill in the art would have been motivated to perform such a modification to prevent terminals from intruding from outside of a closed section (see last lines of ¶16) to improve security (¶17), as taught by Kimura.

Regarding claim 11, Hind discloses requesting the decoding information (CA public key) from the service provider (CA via registry, col. 18, lines 12-15) by using information on the service provider (contents of issuer field, Fig. 3, #305 & col. 18, lines 12-16), if there exists no

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decoding information in the gateway (regardless), the gateway requests the decoding information (public key) from the service provider (certificate authority registry, col. 18, lines 12-15).

Regarding claim 12, Hind, as modified above by Kimura, teaches outputting the authentication request screen to the display (notification of authentication request sent to administering user's display 16, Kimura ¶42) and setting the device to or cutting off the device from the network depending on the response of the user to the authentication result through the authentication request screen (allowing or rejecting the association procedure which starts with the authentication response message, Kimura ¶¶43-44).

Regarding claim 13, Hind, as modified above by Kimura, teaches externally displaying the authentication result (displays to the user the authentication notification (i.e. request to the user), Kimura, ¶42) and inputting a selection command of the user in response to the authentication result in correspondence to the displayed authentication result (user sends an authentication-authorizing input in response to the notification, ¶43).

Regarding claim 14, Hind, as modified above by Kimura, teaches wherein the device is set to or cut off from the network in correspondence to the selection command of the user in the inputting the selection command operation (allowing or rejecting the association procedure is determined by the authentication-authorization input, Kimura ¶¶43-44).

Regarding claim 15, Hind lacks wherein the operation of setting the device or cutting off the device from the network cuts off the device from the network if the user's approval is not inputted for a predetermined period of time. However, Kimura discloses setting a wait timer

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and rejecting a connection to a server if a network administering user has not approved a connection within a predetermined amount of time (§42, §46 & §52). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the server of Hind such that a device is cut off from the network (connection request is rejected) if the user's approval is not inputted for a predetermined period of time. One of ordinary skill in the art would have been motivated to perform such a modification to prevent terminals from intruding from outside of a closed section (Kimura, see last lines of §16) to improve security (Kimura, §17), as taught by Kimura.

Regarding claim 19, Hind, as best understood, the device (client) is a home device (personal computer, col. 7, lines 9-10).

***Allowable Subject Matter***

11. Claims 8-9 & 16-17 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims and any rejections under 35 U.S.C. §112 or objections to the claims made above are overcome.

e. Regarding claim 8 (and 9 by dependence), the prior art of record fails to teach or disclose, either alone or in combination, a selection unit for selecting the display for the authentication result of the authentication process unit based on the device information on the device that is previously stored, in combination with the other elements of the claims.

f. Regarding claim 16 (and 17 by dependence), the prior art of record fails to teach or disclose, either alone or in combination, selecting a display for the authentication result based on the device information of the device connected to the network, in combination with the other elements of the claims.

### ***Conclusion***

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

g. U.S. Patent Application Publication 2003/0126243 to Kudo et al. is cited for teaching a gateway device that receives an address notification message (last 7 lines of ¶31), selects a display to display a connection request (displays connection notification on the gateway and displays a request for acknowledgement to another device connected, last few lines of ¶31), generates an authentication request screen requesting a user to approve or to reject the authentication result (sends request for acknowledgement to network device 200b, ¶¶31-32). The system has the benefit of preventing the unexpected connection of a device to the network (¶6).

h. U.S. Patent 6,938,154 to Berson et al. is cited for teaching devices being manufactured with a public key pair, where a manufacturer's certificate is created (col. 5).

i. U.S. Patent 6,131,120 to Reid is cited for teaching checking a certificate (X.509) at a gateway to authenticate a device to a WAN (col. 9).

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- j. U.S. Patent 6,751,729 to Giniger et al. is cited for teaching a manufacturer's certificate used to certify a device (for authentication).
- k. U.S. Patent Application Publication 2003/0021413 to Kiiveri et al. is cited for teaching the authentication of a device internally using multiple certificates (¶¶33-47).
- l. U.S. Patent 6,185,688 to Greaves et al. is cited for teaching a timeout in authentication approval (col. 1).
- m. "Security Issues in Networked Appliances and Home Gateways" by Neil Pittsley et al. is cited for teaching prior art home network security methods.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael J. Simitoski whose telephone number is (571) 272-3841. The examiner can normally be reached on Monday - Thursday, 6:45 a.m. - 4:15 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kambiz Zand can be reached on (571) 272-3811. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

September 17, 2007

Michael J. Simitoski  
/Michael J. Simitoski/